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## ABSTRACT

This paper lists practices recommended by the Council for Exceptional Children's Division for Early Childhood, concerning general curriculum and intervention strategies in early intervention and early childhood special education (EI/ECSE) programs for infants and young children with special needs and their families. Definitions of "curriculum" and "intervention strategies" are provided; assumptions on which the indicators are based are noted; and division of the indicators into four subsets is discussed. Thirty-one indicators are then listed, within the following four subsets: (1) the broad outcomes that should occur from using appropriate curriculum and instructional strategies; (2) the issues teams should consider in developing and making selections about which strategies to use; (3) the issues teams should consider in making adjustments to the curricular strategies that are used; and (4) the types of strategies that are effective and should be a part of every early childhood educator's repertoire. Thirty-one recommended practices for curriculum and intervention strategies are listed. (Contains 11 references.) (JDD)

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## General Curriculum and Intervention Strategies

Mark Wolery and Diane Sainato

The indicators of recommended practice in the area of general curriculum and intervention strategies are based on several foundations, including values shared in the field, logic, experience, and research. This set of indicators is divided into four subsets: (a) the broad outcomes that should occur from using appropriate curriculum and instructional strategies, (b) the issues teams should consider in developing and making selections about which strategies to use, (c) the issues teams should consider in making adjustments to the curricular strategies that are used, and (d) the types of strategies that are effective and should be a part of every early childhood educator's repertoire. Each of these four groups of indicators are discussed in this section. First, however, definitions of "curriculum" and "intervention strategies" are provided, and the assumptions on which the indicators are based are listed.

### Definition of Curriculum and Intervention Strategies

Although many definitions of curriculum exist, most individuals agree that curriculum includes at least three components (Dunst, 1981; Wolery & Fleming, 1993). The first component is the content (i.e., behaviors, skills, abilities, and patterns of interacting) that is taught. In this section, the term "skills" is used to include all behaviors, abilities, and patterns of interacting. In the case of infants, toddlers, and preschoolers with developmental

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delays and disabilities, the content is quite broad and certainly is different from what many individuals think of when talking about curriculum content for school-age children. The content should include a broad array of developmental and other skills that may be important for many infants, toddlers, and preschoolers, and it should include a sequence of those skills for instruction. The second component of the curriculum involves the methods for identifying the content for each individual. Since the content of the curriculum includes many potential skills, some means is needed to identify which skills are important (from the perspective of the family and other team members) for each individual infant or child at a given time. Often this is done through an instructional program planning assessment, and the statement of the skills that teams believe infants and children should learn are the goals or objectives. The third component of the curriculum involves the methods of teaching the identified content to each individual. These methods are the curriculum and intervention strategies and are defined as the things families and others (e.g., teachers) do to help children learn and use the behaviors, skills, abilities, and patterns of interacting that were identified as important for each child. Of course, in early childhood, the intervention strategies are used in various settings (i.e., homes, clinics, child care programs, schools, and the community), are used by different individuals (peers, family members, teachers, therapists), and are often used in the context of the infant/child's ongoing daily activities and routines.

#### Assumptions of the Recommended Practice Indicators for Curriculum and Intervention Strategies

Several assumptions are implicit in recommended practice in the area of curriculum strategies. First, the experiences infants and children have influence their learning and

development. This assumption indicates that children's development is not solely biological, but that it is a result of interactions between a biologically maturing individual and changing environments. Second, the learning and development of infants and children are potentially influenced by all of their experiences, not only those that professionals view as interventions. Thus, the totality of children's experiences, within and outside of the intervention program, potentially influence how they develop and learn. As a result, our interventions must be sensitive to the unique ecologies in which they live and interact. Third, the adults in the infant/child's world can provide experiences that promote or impede development and learning. Thus, some ways of interacting with infants/children, some schedules of daily routines, some organizations of physical environments facilitate development and learning and others do not. Fourth, no defensible reasons exist for allowing infants/children to have experiences that impede their development and learning. As a result, professionals have a responsibility to ensure that the experiences of infants and children are designed to promote, not interfere with, development and learning.

#### Description of Recommended Practices

As noted above, this set of indicators is divided into four subsets. These are discussed in the following paragraphs.

#### Outcomes of the Curriculum and Intervention Strategies

To be judged as a recommended practice, an intervention should produce several general outcomes. We list nine outcomes that we believe are defensible, and the adequacy and acceptability of each strategy should be judged against these. The use of any strategy should not result in harm to the infant/child, their family, or their relationship. Harm, as

used here, refers to any enduring impact on the infant/child, the family, or their relationship. Harm does not refer to discomfort but to actual interference with a child's development, a family's ability to function, or to the relationship between the child and family. For example, a parent may experience some anxiety about a child's transition from a preschool program to a school-age program. However, while their anxiety can and should be minimized, the transition, in most cases, should not be avoided because of the discomfort they might feel about what the future placement holds. In fact, such discomfort is shared by many families, including those in which the child does not have disabilities.

Intervention strategies also should minimize the extent to which children are dependent upon others and are different from their age-mates. For example, strategies should promote active engagement (participation), initiative (choice making, self-directed behavior), autonomy (individuality and self-sufficiency), and age-appropriate abilities in many normalized contexts and situations. However, in some situations, children should not be expected to be independent, but they should still be allowed to participate. For example, in getting ready for a bath, a 3-year-old child should not be expected to adjust the water to the appropriate temperature, but could be expected to help get ready for the bath (e.g., getting bath toys, assisting in taking off clothing). Thus, while independence, initiative, and autonomy are valued, participation with support and assistance is appropriate in routines where independence is not safe, possible, or practical.

Intervention strategies also should be judged on their ability to cause rapid learning and use of important skills. Thus, strategies should not be used unless children learn the skills being taught. Also, only strategies should be used that result in rapid learning. Such

learning often provides feelings of success and mastery, and it saves time for other goals. Finally, strategies should help children use the skills outside of the situations in which they are initially learned. Early interventionists should not be satisfied if children learn new skills; they should only be satisfied if children use those skills when and wherever they are appropriate and needed.

### Development and Selection of Intervention Strategies

For many of the skills that infants/children need to learn, several strategies may be effective; therefore, some guidelines are needed for selecting among strategies. Nine general indicators are proposed. Early interventionists should devise strategies that support and promote family values and participation as compared to making excessive demands on families, being inconsistent with their cultural practices and belief systems, and interfering with rather than facilitating their participation with the infant/child and the team. Also, strategies should be selected and developed that are based on, follow the lead of, and are responsive to children's behavior. In selecting strategies, interventionists must consider information from relevant disciplines, the extent to which it can be applied in various relevant settings, the extent to which multiple goals can be addressed in a single activity and the extent to which a balance is established between child- and adult-directed learning. These indicators mean that the intervention strategies should have wide application and promote the types of outcomes mentioned above. Also, strategies should be selected which promote learning in each of its different phases: learning how to do new skills, learning to use those skills smoothly and easily, learning to use those skills after intervention has stopped, and learning to apply the skills when and wherever they are needed. Further, if

learning is likely to be equal with more than one strategy, then the one that is most normalized (most similar to that used with typically developing children), least intrusive (allows the most choices for the child and the least restriction of freedoms), and easiest to use should be employed. However, recommended practice does not include using ineffective strategies simply because they are normalized, are not intrusive, and are easily implemented.

### Adjustments of Intervention Strategies

Because of the complexity of development and the multiple effects of disabilities on it, teams often will not devise perfect intervention plans from the beginning; thus, adjustment to the plan will be required. Also, as infants and children become more developmentally advanced, adjustments may be needed. Three indicators of recommended practice are proposed for determining when to make adjustments in the interventions strategies. These include when the infant/child's needs change, when no change in their skills or performance is noted, and when family members express concern about the need for change. Early interventionists who engage in quality practices constantly monitor the effects of the interventions and often adjust those strategies to increase the probability that learning and development will occur. The nature of the adjustments, however, will vary greatly depending upon the child's abilities, the skills being taught, the contexts in which intervention strategies are being used, and nature of the needed change.

### Effective Curricular and Intervention Strategies

In the past two decades, a substantial increase occurred in the number of intervention strategies that have research support. Educators should know about these strategies, know when and how to use them, and know how to make adjustments in their use. Although many

strategies exist, ten indicators of recommended practice are presented. These intervention strategies include the appropriate use of materials and space (Bailey & Wolery, 1992), milieu or naturalistic teaching strategies (Kaiser, Yoder, & Keetz, 1992), strategies that involve peers (Odom, McConnell, & McEvoy, 1992), adult responsiveness to child behavior (Bricker & Cripe, 1992; Dunst et al., 1987), response prompting strategies (Wolery, Ault, & Doyle, 1992), differential reinforcement and response shaping (Cooper, Heron, & Heward, 1987), self-management procedures (Barnett & Carey, 1992), and correspondence training (Baer, 1990). Each of these general categories of interventions have many variations, and each has supporting applied research. Thus, early interventionists who engage in recommended practices select and employ a number of different strategies that have been used and tested with other children. It should be noted that recommended practice is not limited to intervention strategies that have been evaluated through research. It also includes devising new, untested strategies for addressing particular needs of individual children in given contexts. However, when interventionists use those new and untested strategies, they engage in systematic methods for evaluating the effectiveness and efficiency of those strategies.

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# **DEC Recommended Practices**

## **General Curriculum and Intervention Strategies**

Curriculum and intervention strategies are derived from and based on: (a) the individual abilities and needs of infants/children, families' preferences, and the cultural context; (b) information obtained from a comprehensive assessment process and (c) the philosophy of the program.

### **Curriculum and intervention strategies result in:**

- GC1. No harm to infants/children, families, or their relationship.
- GC2. Active engagement of infants/children with objects, people, and events.
- GC3. Increased initiative, independence, and autonomy by infants/children across domains.
- GC4. Increased ability to function/participate in diverse and less restrictive environments.
- GC5. Independent (unprompted) performance of age-appropriate, pro-social behaviors, skills, and interaction patterns.
- GC6. Supported or partial participation in routines/activities when independent performance is not possible.
- GC7. Acquisition (initial learning) of important values, behaviors, skills, and interaction patterns across domains.
- GC8. Generalization, adaptability, application, and utilization of important behaviors, skills, and interaction patterns across relevant contexts.
- GC9. Efficient learning (most rapid acquisition) of important goals (behaviors, skills, patterns of interaction).

### **Curriculum and intervention strategies are developed, selected, and implemented in a manner which:**

- GC10. Supports and promotes family values and participation.
- GC11. Is responsive to infants'/children's interests, preferences, motivation, interactional styles, developmental status, learning histories, cultural variables, and levels of participation.
- GC12. Integrates information and strategies from different disciplines.
- GC13. Structures learning activities in all relevant environments.
- GC14. Establishes a balance between child- and adult-initiated/directed activities.

- GC15. Integrates skills from various domains within routine activities in the classroom (i.e., is activity-based).
- GC16. Promotes acquisition (initial learning), fluency (proficiency), maintenance (retention), and generalization (application, utilization) of important goals (behaviors, skills, and patterns of interaction).
- GC17. Is most natural, normalized, and/or least intrusive, given that the benefits to individual infants'/children's learning are equal.
- GC18. Is most parsimonious (simpler/simplest) given that the benefits to individual infants'/children's learning are equal.

**Curriculum and intervention strategies are modified and adjusted as needed and in a timely manner based upon:**

- GC19. The changing needs of individual infants/children and their families.
- GC20. Observed and documented performance of infants/children.
- GC21. Concerns, opinions, and needs expressed by the family.

**Effective curriculum and intervention strategies include:**

- GC22. Use of materials that have multiple purposes, are adaptable, are varied, and reflect functional skills.
- GC23. Milieu strategies (i.e., incidental teaching, mand-model procedure, modeling, and naturalistic time delay) that involve brief interactions between adults and children.
- GC24. Peer-mediated strategies (e.g., social interaction training, peer initiation training, peer modeling, peer prompting and reinforcement).
- GC25. Adult imitation of infants'/children's play and other behavior.
- GC26. Elaboration of infants'/children's behavior by providing models, re-stating the child's vocalizations, suggesting alternatives, and open-ended adult questions.
- GC27. Prompting strategies (e.g., constant and progressive time delay, system of least prompts, simultaneous prompting, most to least prompting, graduated guidance) that provide learning opportunities, adult assistance, reinforcement for correct performance, and fading prompt assistance.
- GC28. Differential reinforcement that provides children with feedback for desired performance and withholding feedback (e.g., planned ignoring) when desired performance does not occur.

- GC29. Response shaping that provides positive reinforcement for progressively more complex performance.
- GC30. Self-management procedures that involve teaching children to identify appropriate behavior, evaluate their own performance, direct their performance verbally, and select reinforcement based on an evaluation of their performance.
- GC31. Correspondence training, which involves providing children with positive reinforcement for matching what they say they will do (Say-do strategy) or have done (Do-say strategy) with their actual performance.